

Preface

The 8th International Workshop on Robotics Software Engineering (RoSE 2026) was held in Vienna, Austria, on June 1st, 2026, co-located with the 2026 IEEE International Conference on Robotics & Automation. The workshop brought together researchers and practitioners from academia and industry to discuss recent advances, challenges, and future directions in robotics software engineering.

The topics of interest of the workshop included, but were not limited to:

- AI agents in the context of robotic software systems
- AI-enhanced development of robotics systems
- Analysis of challenges in robotic software engineering
- Best practices in engineering robotic software
- Continuous integration and deployment in robotics
- Domain-specific languages and tools for the development of robotic software
- Empirical studies of robotics software and software tools, including its usability
- Engineering (heterogeneous) multi-robot systems.
- Identification and analysis of design principles promoting quality of service (e.g., performance, energy efficiency)
- Lessons learned in the engineering and deployment of large-scale, real-world integrated robot software
- Machine learning applied to robotic software
- Metrics measuring non-functional properties (e.g., robustness, availability, etc.) and their application to robotic software
- Mining software repositories of robotic systems
- Model-Driven Engineering methods and techniques applied to robotic software
- Processes and tools supporting the engineering and development of robotic systems
- Software architecture of robotic systems

- State-of-the-art research projects, innovative ideas, and field-based studies in robotic software engineering
- Static and dynamic analysis of robotic software
- Usability studies of robotics software and tools
- Variability, modularity, and reusability in robotic software
- Validation and verification of robotic software

The workshop received 29 submissions. Each submission was reviewed by at least 3 members of the Program Committee following a double-blind peer-review process. The evaluation considered originality, technical quality, relevance to the workshop topics, clarity of presentation, and potential impact.

The paper submission deadline was March 16th 2026, and the notification of acceptance was sent on April 15th, 2026. The final camera-ready versions were due on April 30th, 2026.

Based on the reviews and discussions among the Program Committee members, 13 papers were accepted for presentation and inclusion in the workshop proceedings.

We would like to sincerely thank all authors for submitting their work to the workshop, the Program Committee members for their valuable reviews and constructive feedback, and the organizing committee for their support in making ROSE 2026 possible.

Organizing Committee

- Michel Albonico (Technological Federal University of Paraná, Brazil / University of Southern Denmark (SDU), Denmark)
- Hannan Ejaz Keen (XITASO GmbH, Germany)
- Ricardo D. Caldas (Gran Sasso Science Institute (GSSI), Italy)

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